This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-36 (Cancelled)

37. (Currently Amended) A method of selecting an asphalt mixture for making an interlayer for a roadway, comprising:

providing at least one asphalt mixture comprised of a polymer-modified binder and **[[hard]]** mineral aggregate wherein the **[[hard]]** mineral aggregate is present in the at least one asphalt mixture in an amount ~~greater~~ less than about **[[15%]]** 93% by weight of the at least one asphalt mixture, the polymer-modified binder mixed under low shear blending conditions;

performing a stability test on said at least one asphalt mixture;

performing a fatigue test on said at least one asphalt mixture; and

selecting an asphalt mixture for said interlayer after performing said stability and fatigue tests based on stability and fatigue performance of said at least one asphalt mixture.

38. (Previously Presented) The method of claim 37, wherein said stability test is a Hveem Stability test and wherein said selected asphalt

mixture has a Hveem Stability at 60°C and 50 gyrations of at least about 18.

39. (Previously Presented) The method of claim 37, wherein said fatigue test is a Flexural Beam Fatigue Test and said selected asphalt mixture has a Flexural Beam Fatigue of at least about 100,000 cycles at 2000 microstrains, 10 Hz, about 204% air voids, and at a temperature of about 0 to 30°C.

40. (Previously Presented) The method claim 37, further comprising:

adding a cross-linking agent to said binder before performing said stability and fatigue tests on said at least one asphalt mixture.

41. (Cancelled)

42. (Previously Presented) The method of claim 37, further comprising:

prior to said providing step, determining the shear modulus, strain tolerance, and the bending creep stiffness of at least one polymer-modified binder; and

selecting said binder for making said at least one asphalt mixture after performing and based on said shear modulus, strain tolerance and bending creep stiffness measurements.

43. (Previously Presented) The method of claim 37, further comprising:

prior to said providing step, determining the rotational viscosity of at least one polymer-modified binder; and

selecting said binder for making said at least one asphalt mixture after performing and based on said rotational viscosity measurement.

44. (Previously Presented) The method of claim 37, further comprising:

performing volumetric testing on said at least one asphalt mixture; and

selecting said asphalt mixture for said interlayer after performing said volumetric testing and based on volumetric performance of said at least one asphalt mixture.

45. (Currently Amended) A method of reconstructing a roadway, said method comprising:

providing at least one asphalt mixture comprised of a polymer-modified binder and **[[hard]]** mineral aggregate wherein the **[[hard]]** mineral aggregate is present in the at least one asphalt mixture in an amount ~~greater~~ less than about **[[15%]]** 93% by weight of the at least one asphalt mixture, the

polymer-modified binder mixed under low shear blending conditions;

performing a stability test on said at least one asphalt mixture;

performing a fatigue test on said at least one asphalt mixture;

selecting an asphalt mixture for an interlayer after performing said stability and fatigue tests based on stability and fatigue performance of said at lease one asphalt mixture;

applying said selected asphalt mixture as said interlayer to said roadway;

determining a desired thickness of an overlay to be applied to said interlayer based on traffic levels; and

applying said overlay to said interlayer in said desired thickness.

46. (Previously Presented) The method of claim 45, wherein said interlayer is applied at a temperature above about 140°F and is cooled to below about 140°F before applying said overlay.

47. (Previously Presented) The method of claim 45, wherein said roadway is comprised of Portland Concrete Cement.

48. (Previously Presented) The method of claim 45, further comprising:

sweeping said roadway; and

sealing cracks in said roadway before applying said interlayer.

49. (Previously Presented) The method of claim 45, wherein said overlay is at least about 1 inch thick.

50. (Previously Presented) The method of claim 45, further comprising:

allowing traffic to drive on said interlayer before applying said overlay.

51. (Previously Presented) The method of claim 45, wherein said overlay is comprised of hot mix asphalt.

52. (Previously Presented) The method of claim 51, wherein said overlay is further comprised of a SB/SBS polymer modified asphalt binder.

53. (Previously Presented) The method of claim 45, further comprising:

performing volumetric testing on said at least one asphalt mixture; and

selecting said asphalt mixture for said interlayer after performing said volumetric testing and based on volumetric performance of said at least one asphalt mixture.

54. (Previously Presented) The method of claim 50, wherein said interlayer is cooled to below about 140°F before releasing said interlayer to traffic.

55. (Currently Amended) A method of making an interlayer for a roadway, comprising:

forming an asphalt mixture comprised of a polymer-modified asphalt binder and **[[hard]]** mineral aggregate wherein the **[[hard]]** mineral aggregate is present in the asphalt mixture in an amount ~~greater~~ less than about **[[15%]]** 93% by weight of the at least one asphalt mixture, the polymer-modified binder mixed under low shear blending conditions, said asphalt mixture having a Hveem Stability at 60°C and 50 gyrations of at least about 18 and a Flexural Beam Fatigue of at least about 100,000 cycles at 2000 microstrains, 10 Hz, about 2-4% air voids, and at a temperature of about 0 to 30°C; and

forming an interlayer for a roadway from said asphalt mixture.

56. (Previously Presented) The method of claim 55, wherein said polymer-modified asphalt binder has a ductility of at least about 10 cm, at 4°C on RTFO residue at 5 cm/min strain rate, when using straight-sided molds.

57. (Currently Amended) A method of selecting an asphalt mixture for making an interlayer for a roadway, comprising:

performing a ductility test on at least one polymer-modified binder;

selecting a binder for making an asphalt mixture after performing said ductility test and based on said ductility test;

providing at least one asphalt mixture comprised of said selected binder and **[[hard]]** mineral aggregate wherein the **[[hard]]** mineral aggregate is present in the at least one asphalt mixture in an amount ~~greater~~ less than about **[[15%]]** 93% by weight of the at least one asphalt mixture, the polymer-modified binder mixed under low shear blending conditions;

performing a stability test on said at least one asphalt mixture;

performing a fatigue test on said at least one asphalt mixture; and

selecting an asphalt mixture for said interlayer after performing said stability and fatigue tests based on stability and fatigue performance of said at least one asphalt mixture.

58. (Previously Presented) The method of claim 57, wherein said selected binder has a ductility of at least about 10 cm, at 4°C on RTFO residue at 5 cm/min strain rate, when using straight-sided molds.

59. (Previously Presented) The method of claim 58, wherein said selected asphalt mixture has a Hveem Stability at 60°C and 50 gyrations of at least about 18 and a Flexural Beam Fatigue of at least about 100,000 cycles at 2000 microstrains, 10 Hz, about2-4% air voids, and at a temperature of about 0 to 30°C.